ANNUAL REPORT

OF THE

COMMITTEE

OF THE

MANCHESTER AND SALFORD

SANITARY ASSOCIATION,

BEING

A SUMMARY OF THEIR PROCEEDINGS FOR THE YEAR 1868.

APPENDICES:

WATER-CLOSETS *versus* PRIVIES, BY JOHN NEWTON, ESQ.

OBJECTIONS TO WATER-CLOSETS ANSWERED, BY P. H. HOLLAND, ESQ.

THE GREAT SANITARY QUESTION OF THE DAY.—HOW TO DISPOSE OF OUR REFUSE, BY DR. SYSON.

WHAT SHALL WE DO WITH OUR REFUSE? BY DR. SIMPSON.

THE HIGH DEATH-RATE, AN ANSWER TO THE QUESTION WHAT IS TO BE DONE? BY J. CONYERS MORRELL, ESQ.

MANCHESTER:
POWLSON & SONS, PRINTERS, BOW ST., JOHN DALTON STREET.
1869.

At the ANNUAL MEETING of the Manchester and Salford Sanitary Association, held at the Committee Rooms, No. 33, Pall Mall, on Friday, April 23rd, 1869:

THOMAS TURNER, ESQ., F.R.C.S., IN THE CHAIR.

The Annual Report having been read;

It was moved by Dr. A. RANSOME; seconded by Mr. H. C. OATS;

That this Meeting approving of the proceedings of the Committee, as set forth in their Report, request that the said Report may be printed and extensively circulated.

Moved by Dr. NOBLE; seconded by Dr. WHITGREAVE;

That the practical efforts of the Committee to improve the condition of the poorer classes, by directing attention to sanitary laws, deserve the encouragement and pecuniary support of this Meeting and the public in general.

Moved by Dr. SYSON; seconded by Mr. HEATH;

That the best thanks of this Meeting be given to the President, Vice-Presidents, Committee, and Officers, for the unwearied attention they have devoted to promoting the interests of this Association, and that the following noblemen and gentlemen be requested to act for the ensuing year.—(For names see opposite page.)

THOMAS TURNER.

The Chair having been taken by Dr. NOBLE:

It was moved by Dr. PIGG; seconded by Mr. MELLOR;

That the thanks of this Meeting be given to THOMAS TURNER, Esq., for presiding on this occasion.

JOHN ROBERTS, M.D.,
C. H. KNIGHT, } Hon. Secs.

MANCHESTER AND SALFORD SANITARY ASSOCIATION.

Committee and Officers for the Year 1869.

President:

The Right Rev. The LORD BISHOP OF MANCHESTER.

Vice-Presidents:

The Worshipful the MAYOR of MANCHESTER.
The Worshipful the MAYOR of SALFORD.
The Very Rev. the DEAN of MANCHESTER.
MARQUIS of HARTINGTON.
Hon. ALGERNON EGERTON, M.P.

Sir E. ARMITAGE.
Sir JAS. BARDSLEY, M.D.
Rev. Canon RICHSON, M.A.
THOMAS BAZLEY, Esq., M.P.
W. FAIRBAIRN, Esq., LL.D., F.R.S.
A. H. HEYWOOD, Esq.
JOHN CHEETHAM, Esq.
JOS. WHITWORTH, Esq., M.Inst.C.E.

Treasurer:

Mr. OLIVER HEYWOOD.

Chairman:

Mr. THOMAS TURNER, F.L.S., F.R.C.S.

Deputy-Chairman:

Mr. DANIEL NOBLE, M.A., M.D., F.R.C.P.

Committee:

Mr. J. H. BARR.
Mr. Alderman BOOTH.
Mr. GEO. BOWRING.
Mr. S. H. BRADLEY.
Dr. F. CRACE CALVERT, F.R.S.
C. E. CAWLEY, Esq., M.P., M.Inst.C.E.
Mr. H. CHARLEWOOD.
Mr. Alderman T. DAVIES.
Dr. A. E. DAVIES.
Dr. J. S. FLETCHER.
Mr. GEORGE GREAVES, M.R.C.S.
Mr. WILLIAM HEATH, M.R.C.S.
Mr. FRANCIS GREG.
Mr. J. W. JACKSON.
Mr. Alderman KING.
Mr. J. LASCELLES.
Mr. JOHN LEIGH.
Dr. LEDWARD.
Mr. T. MACKERETH, F.R.A.S., M.B.M.S.
Mr. F. MARRIOTT.
Mr. J. W. MACLURE, F.R.G.S., F.S.S.
Mr. THOMAS MELLOR, F.R.C.S.
Dr. MORGAN.
Mr. JOHN NEWTON, M. Inst. C.E.
Mr. H. C. OATS.
Dr. PIGG.
Professor REYNOLDS.
Mr. WILLIAM REES.
Mr. A. RANSOME, M.A., M.B., M.R.C.S.
Dr. ROSCOE, B.A.
Mr. WM. ROYSTON.
Mr. T. D. RYDER, M.A.
Dr. SAMELSON.
Mr. THOS. SCHOFIELD,
Dr. SIMPSON.
Dr. R. A. SMITH, F.R.S.
Dr. SYSON.
Mr. G. V. VERNON, F.R.A.S., M.B.M.S.
Dr. WHITGREAVE.
Dr. M. A. EASON WILKINSON.
Rev. F. C. WOODHOUSE.
Mr. Councillor WILLIAMS.

Honorary Secretaries:

Dr. JOHN ROBERTS. | Mr. C. H. KNIGHT.

Communications for the Committee may be addressed to—

THOMAS TURNER, Esq., Chairman,
77, Mosley Street.

Dr. NOBLE, Deputy Chairman,
Piccadilly.

OLIVER HEYWOOD, Esq., Treasurer,
St. Ann's Street.

The Honorary Secretaries, { Dr. JOHN ROBERTS, Oxford Street.
C. H. KNIGHT, Esq., 88, Mosley Street.

Or to

Mr. C. G. CARTLEDGE, Secretary,
At the Offices of the Association, 33, Pall Mall,
(Near to the Bank of England.)

REPORT.

The Committee, in presenting their Annual Report, regret that the health of Manchester and Salford has been very unsatisfactory during the year 1868. They are of opinion that the great mortality of the City and Borough is caused by the bad state of the ash-pits and sewers, by the very faulty construction and arrangement of the houses of the working classes, by the dirty and intemperate habits of too many of the people, and in part by the want of accommodation for infectious diseases.

The Committee, in their Annual Reports, have frequently drawn attention to the necessity for isolating cases of infectious disease from surrounding healthy persons. At the last annual meeting of the Association this subject was brought forward by Mr. Leigh, who proposed that additional accommodation should be supplied for infectious diseases. The Committee held several meetings to discuss the question, and finally presented a requisition to the Mayor (R. Neill, Esq.) to call a public meeting to consider the means to be adopted towards supplying the deficiency.

In compliance with the requisition a public meeting was held in the Town Hall on the 23rd July, and all who took part in it agreed that it was necessary to remove cases of infectious disease into wards set

apart for their treatment, but no determination was come to, owing to the want of exact information respecting the existing accommodation for fever cases in Manchester. A Committee of Enquiry was appointed at the meeting, and this Committee subsequently deputed Messrs. J. A. Bremner, H. L. Steinthal, Councillor Birch, and Charles Pooley to investigate the present state of hospital accommodation for such cases.

The above gentlemen obtained the following information from the four hospitals which admit fever cases :—

Name of Hospital,	No. of beds now set apart for fever cases	Total capacity for fever cases	No. of fever cases under treatment	Are such beds in a separate wing?
Children's Hospital, Bridge-street	5	5	5	No: infection has thus twice spread to other wards.
Royal Infirmary.....	32	70	21	Yes
Workhouse Hospital, New Bridge-street..	90	160	22	Yes
Workhouse Hospital, Withington.....	60	100	28	Yes

The Sub-Committee came to the following conclusions :—

"1.—Your Sub-Committee consider that ample provision exists in the Workhouse Hospitals for the reception of all pauper cases of febrile infectious disease.

"2.—The Royal Infirmary being the only hospital for infectious cases among the independent poor, the accommodation for this class seems inadequate; it

being objectionable to mix up the sick of this superior class with paupers.

"3.—For the children of the independent poor, suffering from these infectious diseases, there is practically no hospital accommodation whatever.

"It is important to notice that, of the 5,000 cases occurring annually of febrile infectious disease, a very large proportion occurs among children under ten years of age, for whom no hospital exists. On the ground, therefore, both of economy and humanity, your Sub-Committee feel it their duty to put in a claim for some hospital provision for this class.

"4.—Such hospital provision would be beneficial (1) in securing the recovery of many more cases than if treated at the homes of the patients, and (2) in checking the spread of infection among the families of the poor.

"It seems to your Sub-Committee that, as so large a proportion as four-fifths (80·16) of the mortality from these diseases occurs among young children, the heavy death-rate in the city is largely due to this, and can best be modified by hospital provision being made for children and more ample accommodation for adults of the independent poor.

"5.—Speaking generally, your Committee consider that should an epidemic of a febrile infectious character occur in this city, adequate hospital capacity does not at present exist to meet such an emergency.

"6.—Finally, your Sub-Committee desire to point

out the importance of detailed statistics being kept at all the hospitals, which shall embrace particulars of the number of cases and deaths occurring, from year to year, in every leading disease."

The Committee of the Manchester and Salford Sanitary Association ceased to take a part in the movement when the public meeting was called, therefore the summary now quoted is taken from the report of the Committee appointed at the meeting in the Town Hall.

The plea for more wards for adults suffering from infectious disease was not strongly put, evidently because the beds now set apart for them have not been used to anything like the full extent. It will be seen in that portion of the report which treats of diseases, that only about one-fifth of the graver cases of Continued Fever (which principally seizes adults) was this year treated in fever wards, the remaining four-fifths being treated at the homes of the patients, and thus opportunity was afforded for the spread of the disease.

The Sub-Committee on Hospital Accommodation, in coming to their fifth conclusion, appear to have regarded "an epidemic of a febrile infectious nature" as a contingency which might or might not occur. Indeed during the year Scarlatina and Continued Fever, the most dangerous of febrile infectious diseases, have been so prevalent that the term epidemic may well be applied to each of them, and unfortunately the disease returns of this Association

shew that an epidemic of some kind or other is becoming only too frequent in Manchester, so much so that it is not at all unlikely we shall have Continued Fever prevailing constantly to a great extent amongst us, unless a great change be wrought in the sanitary condition of the city.

Towards the end of the year Mr. Newton introduced a discussion on the respective merits of water closets and ash-pits, and read a paper on the question which is appended to this report, together with the papers that followed during the course of the discussion.

The Committee think this discussion has been of service, and that the publication of the papers read by Messrs. Newton, Holland, and Morrell, and Drs. Syson and Simpson, will tend to hasten the settlement of this difficult question, by making generally known the opinions held by those who have given special attention to the consideration of the best means for the removal of the refuse of towns.

It was admitted at the meetings held to consider this subject, that no plan should be generally adopted which does not provide for the speedy removal of fœcal matter from the vicinity of dwelling-houses. Neither the Manchester nor Salford method does this, and therefore the Committee think they should not be applied generally, unless a provision were made for the removal of the contents of the ashpits at very short intervals. The water-closet, in conjunction with *well laid*

sewers, provides for the immediate removal of the offending matter to a safe distance; but the loss of so much valuable manure, and the pollution of the river which receives it, are such strong arguments against the general adoption of water-closets, that their most zealous advocates do not now propose them on a large scale, without stipulating for excellent sewers and a plan for conveying the whole sewage for utilisation on the land. Before water-closets are adopted for all the houses in large, and especially in inland towns, no doubt should remain as to the feasibility of keeping sewage matter from streams and its utilisation on the soil. On the other hand, the dry system ought not to be generally applied before it merits the name, and before a scheme is fixed upon for the frequent removal of the contents of the ash-pits; and, further, disinfectants should be freely used whenever the ashes are not to be had in sufficient quantity, and also after each removal of the night-soil.

On examining the returns of deaths and diseases for 1868, published by the Sanitary Association, it will be found that there is an increase upon the returns of 1867 under both heads. In 1867, 13,763 deaths were registered in the eleven registration districts which supply returns to the Association; the number for 1868 is higher by 704, being 14,467. An increased mortality was observed in all the districts, with the exception of Chorlton, where the number of deaths was less by 10 than in the preceding year. The diseases which es-

pecially contributed towards the increase were Fever, Scarlatina, and Diarrhœa. A scrutiny of the tables of disease observed in the public institutions of Manchester and Salford leads to very much the same result. Last year 79,337 cases came under treatment; this year the number has risen to 84,010, being an increase of 4,673 cases, which was in great measure caused by the prevalence of the three diseases referred to. The deaths in public practice amounted to 3,335, being 1 death to every 25 cases. In 1866 and 1867 the proportion was respectively 1 in 23·5 and 1 in 24·89.

Continued Fever is the zymotic disease which prevailed to the greatest extent during the year. Taking the disease returns of the Association as a guide we find, though more prevalent, it was not so fatal as in 1866. In 1866, 4,752 cases of Continued Fever were treated at the various hospitals and in the poor-law districts; this year the number was 6,099. In 1866 the deaths among this class of cases were 426, or at the rate of 1 in 11; while in 1868 they were 335, or at the rate of 1 in 18. It is well here to draw attention to a change in the form of the returns; up to July, 1867, there was no distinction drawn between the different varieties of fever, but Typhus and Typhoid Fevers and Febricula were included under the term Continued Fever. The inclusion of Febricula with the specific fevers interfered with the proper estimation of the mortality of the latter; Febricula, however, should

not be entirely disregarded when treating of fever, as many of the mild cases of the latter, having a duration of a week or ten days, are most likely returned under Febricula. Deducting the cases of Febricula, then, from the total 6,099, the number of fever cases for the year was 3,822 and the deaths 331, or 1 in every 11·5 cases. In the eleven registration districts which supply returns to the Sanitary Association 930 deaths from fever were recorded during the year. Assuming that the rate of mortality was the same for all the cases as that which prevailed in public practice, about 10,230 of the adult population of Manchester and Salford were prostrated with this disease in the course of the past year. The disease and death returns show that fever was more prevalent in the first quarter of the year than in the second, more so in the third than in either of these two, and most of all in the last quarter. The deaths from this disease for the four quarters respectively were 177, 165, 253, and 335. The cases of fever tabulated in the returns for these four quarters were 712, 681, 1,029 and 1,400. These figures show in the separate records of death and disease a striking accordance, and are a proof of the great value of the weekly returns of disease which the Association is enabled to publish with the generous assistance of the medical men of Manchester and Salford.

Another disease which greatly raised the death-rate for the year was Scarlatina. This disease has been

epidemic since 1862. In 1861, 64 deaths only occurred in the eleven registration districts, in the next year they rose to 197, and in 1863 they reached the high figure of 1,375; in 1864 they fell to 942, in 1865 there was a further fall to 296; in 1866, however, they rose to 360, in 1867 to 534, and this year to 1,510,—135 more than 1863, and 976 more than in 1867. In 1866 423 cases of this disease were observed in public practice with a death-rate of 1 in 22, in 1867 there were 603 cases and a death-rate of 1 in 12, this year there were 1,895 cases and 208 deaths, or a death-rate of 1 in 9; assuming this rate to have been general throughout the districts 13,590 cases of Scarlatina occurred in Manchester and Salford during the year. This disease must have spread very extensively during the latter half of this period, for the returns of deaths and seizures were both twice as numerous in the last as they were in the first six months. The increase was more marked in Chorlton than in any of the other districts, the cases were there more than four times as numerous as in 1867; in Manchester and Salford they were not quite four times the number of the previous year, and in Hulme and Ardwick they were not double the number for 1867.

Attention has already been drawn to the proportion of fever cases in public practice, treated in separate wards, to the number attended to at their homes. Taking the calculations already made, it may be said that, out of the 10,230 cases of fever assumed to have

occurred in the course of the year, only 1,718 were treated in special wards for infectious diseases; and of the 13,590 cases of Scarlatina calculated to have occurred during the year only 295 were treated in such wards. Thus of the aggregate total of these diseases, amounting to 23,820 cases, only 2,013 were isolated during their treatment.

Diarrhœa is the third zymotic disease which was very prevalent in 1868. The mortality from this cause has been very great since 1865, when 1,385 deaths were registered. In the year 1864 the number was as low as 687; in the last three years the deaths from Diarrhœa were respectively 1,044, 1,245, and 1,430. The cases of this disease recorded in the weekly returns of the Association were in 1866, 6,421 and 94 deaths, or 1 in 68; in 1867, 3492 cases and 133 deaths, or 1 in 24; while in 1868 there were 4,596 cases and 180 deaths, or 1 in 25.

Quarterly Return of Deaths from Zymotic Diseases in Manchester and Salford for 1868, *compiled from the Weekly Returns.*

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Variola	1	2	3	7	13
Measles	41	94	94	50	279
Scarlatina	256	269	440	545	1510
Whooping-Cough	203	76	21	16	316
Diarrhœa	76	68	1117	169	1430
Fever	177	165	253	335	930
Total	754	674	1928	1122	11478

Quarterly Return of Zymotic Diseases in Public Practice for 1868, *compiled from the Weekly Returns.*

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Variola	5	6	15	44	70
Measles.....	67	212	166	82	527
Scarlatina	276	374	627	618	1895
Diphtheria	3	1	2	6	12
Whooping-Cough..	423	161	28	8	620
Diarrhœa	460	684	2907	545	4596
Dysentery	37	37	85	24	183
Continued Fever	273	274	436	543	1526
Typhus	382	337	397	608	1724
Typhoid	57	70	196	249	572
Total	1983	2156	4859	2727	11725

The Sanitary Lectures delivered under the auspices of the Association continue to attract large and attentive audiences, it being not at all uncommon for working-men to travel three or four miles to hear them. The subjects treated of in these Lectures and the names of the gentlemen who delivered them are appended.

The Committee regret that Mr. Heap is unable to continue the editing of the meteorological returns; Mr. Mackereth, F.R.A.S., has however kindly undertaken the task.

The Sanitary Association has lost a faithful and valued member of its Committee in the person of the

late Mr. Teale, M.R.C.S., who was besides a constant contributor to the weekly returns.

In conclusion, the Committee wish to draw attention to the financial position of the Association. The income for the year is £241 12s. 2d., being less by £28 2s. 8d. than that for 1867. During the year 1868 the expenditure has again exceeded the income. On January 1st, 1867, there was a balance to the credit of the Association of £33 6s. 5d.; on January 1st, 1868, this balance was reduced to £15 8s. 6d.; and, at the end of the year, it was only 4s. 11d.

It is impossible for the Association to continue its operations without a considerable increase in the Annual Subscriptions, therefore the Committee trust that an appeal for pecuniary assistance in the course of the ensuing year will not be made in vain.

THE FOLLOWING LECTURES HAVE BEEN DELIVERED DURING THE YEAR:—

Lecturer.	Subject.	Place.
T. Turner, Esq., F.R.C.S.	*The application and importance of Sanitary Laws in New Districts*	St. Mark's School, Clowes-street, West Gorton.
Ditto	*The Responsibility of Man as a Sanitary Agent*	All Souls' School, Every-street, Ancoats.
Ditto	*The Past, Present, and Future of Sanitary Science* ..	Hulme Town Hall, Stretford-road.
Ditto	*Household Memories connected with Health and Home*	St. Patrick's School, Livesey-street, Oldham-road.
Dr. Ledward, M.R.C.S.	*Nourishment*	City Mission Room, Bank-street, Hulme.
Ditto	*Catching Cold*	Independent School, Knott Mill.
Ditto	*The Lungs and Breathing* ...	Temperance Hall, Grosvenor-street, Chorlton-upon Medlock.
Ditto	*Winter Mortality*	Independent School, Osborne-street, Oldham-rd.
Dr. J. Shepherd Fletcher, M.R.C.S	*Old Age.—How to attain it* ..	Unitarian School, Bridge-street, Strangeways.
Ditto	*Do.* *Do.*	St. Paul's School, Bennett-street, Oldham-road.
Dr. Arthur E. Davies	*Water: its Pollution in relation to Health. Illustrated by numerous chemical experiments.*	Egerton Schools (St. Bartholomew's) Derby-street, Regent-road.
Ditto	*Fresh Air. Illustrated by numerous chemical experiments.*	St. Mark's School, Clowes-street, West Gorton.

Lecturer.	Subject.	Place.
Dr. Syson, Officer of Health for Salford	*The Cry of the Children*.....	Salford Town Hall.
Dr. Vincent Whitgreave...	*Public Health, as influenced by each and every individual.*	St. Jude's School, Canal-street, Ancoats.
R. T. Hunt, Esq., M.R.C.S	*The Sanitary Management of the Eyes, in relation to Disease and Injury*.....	Temperance Hall. Grosvenor-street, Chorlton-upon Medlock.
Dr. W. H. Barlow, Honorary Medical Officer to General Hospital and Dispensary for Sick Children.....	*Hints to Mothers upon the Management of Children*..	St. John's School, Miles Platting.
Dr. James Hardie, Honorary Surgeon to the Clinical Hospital	*Why we Breathe; with remarks on the bad effects of Impure Air*.....	St. Mary's School, Upper Moss-lane, Hulme.
Ditto	*Do.* *Do.*	St. Thomas' School, North-street, Ardwick-green.
Rev. St. Vincent Beechey, M.A..	*The Moon as a Sanitary Commissioner*	St. Paul's School, Mulberry-street, Hulme.
T.E.Thorpe, Esq. Owens College..	*The Air we Breathe. Illustrated by chemical experiments.*	St. Stephen's School, Salford.
Arthur Ransome Esq., M.B., MA. Cantab.M.R.C.S	*The Food we Eat*	Rusholme-road School.
E. Hunt, Esq.....	*What the Earth is made of. With experiments*	Christ Church School, Hope street, Salford.

OLIVER HEYWOOD, ESQ., *Treasurer, in Account with the Manchester and Salford Sanitary Association.*

JANUARY 1ST, 1868, TO DECEMBER 31ST, 1868.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Balance in Bank, 31st December, 1867	15	8	6	By Rent and Taxes	42	0	0
,, Interest allowed by Bankers to 31st December, 1868	0	1	2	,, Secretary's Salary	60	0	0
,, Subscriptions	225	7	6	,, Commission allowed Collector	11	5	0
,, Tracts sold	0	15	0	,, Expenses attending Lectures	10	14	7
				,, Postages	16	15	5
				,, Petty Cash, including Wages of Boy	15	14	7
				,, Office Furniture, &c.	1	2	6
				,, Printing	78	12	6
				,, Advertising	3	10	9
				,, Stationery and Books	1	11	11
				,, Balance in Bank	0	4	11
	£241	12	2		£241	12	2

Examined and found correct:

WILLIAM BOOTH,
WILLIAM ROYSTON.

Manchester,
December 31*st,* 1868.

Members from Donations in former Years.

	£	s.	d.
W. R. Callender, Senr., Esq. (1867)	5	0	0
Atherton Miss (1866)	50	0	0
A Friend, per T. Turner, Esq. (1866)	10	0	0
Barbour Robert, Esq.	10	0	0
Binyon Miss (Clifton)	5	0	0
Brooks Samuel, Esq.	5	0	0
Chadwick R., Esq.	20	0	0
Callender W. R., Senr., Esq.	5	0	0
Coultate E., Esq.	5	0	0
Ellesmere the Earl of	5	0	0
Gardner Robert, Esq.	5	5	0
Gillibrand P., Esq.	5	0	0
Heywood E. S., Esq.	20	0	0
Heywood Sir B., Bart.	5	5	0
Heywood Arthur H., Esq.	5	0	0
Heywood James, Esq.	5	5	0
Heywood Oliver, Esq.	15	0	0
Houldsworth Henry, Esq.	10	0	0
Jones R. Jennings, Esq.	5	0	0
Jones W. C., Esq.	5	0	0
Mackintosh Messrs. C., and Co.	5	5	0
Manchester the Lord Bishop of	10	0	0
Potters and Norris Messrs.	5	5	0
Plant James, Esq.	5	0	0
Schunk, Souchay, and Co., Messrs.	5	0	0
Spafford George, Esq.	5	5	0
Taylor J. E., Esq.	5	5	0
Todd and Coston, Messrs.	5	0	0
Turner J. Aspinal, Esq., M.P.	5	0	0
Watkin W. B., Esq.	10	0	0
Wood W. Rayner, Esq.	5	0	0

SUBSCRIPTIONS.

	£	s.	d.
Atherton James, Esq., Bridgewater-place	2	2	0
Agnew Thomas, Esq., Fair Hope, Eccles	1	1	0
Atkinson and Gould, Messrs., 6, Mosley-street	1	1	0
Andrew Henry, Esq., 13, Bread-street, High-street	1	1	0
Alcock Misses, The, Nelson-street, Chorlton-upon-Medlock	1	1	0
Barbour Messrs. R., and Brother, Aytoun-street	2	2	0
Brooks William Cunliffe, Esq., the Bank, King-street	2	2	0
Bardsley Sir James L., M.D., Chatham-street	1	1	0
Behrens Messrs. S. L., and Co., 22, Oxford-street	2	2	0
Brown Messrs. J., Son, and Co., Portland Street	2	2	0
Butterworth and Brooks, Messrs., Charlotte-street	2	2	0
Bellhouse Messrs. J. and W., Minshull Mills, Old Garratt	2	2	0
Bannerman J. A., Esq., 33, York-street	1	1	0
Browne Dr. Henry, Clairville, Oxford-street	1	1	0
Brown William B., Esq., Leaf-square	1	1	0
Booth William, Esq., Oldham-street	1	1	0
Boutflower J., Esq., Bury New Road	1	1	0
Buckley Edmund, Esq., Ducie-street, Piccadilly	1	1	0
Bazley Thomas, Esq., M.P.	1	1	0
Behrens Jacob, Esq., 41 Portland-street	1	1	0
Beever, Darwell, and Taylor, Messrs., John Dalton-street	1	1	0
Bazley Henry, and Co., Messrs., Chapel-street, Ancoats	1	1	0
Binyons, Robinson, and Co., Messrs., St. Ann's-square	1	1	0
Bradshaw and Co., Messrs. J., Artillery-street	1	1	0
Bazley T. Sebastian, Esq., Little Grove, East Barnet, Herts	2	2	0

	£	s.	d.
Bank of England, King-street	1	1	0
Bright Messrs., and Co., 22, New Brown-street	1	1	0
Barker N., Esq., Rusholme	0	10	6
Bromiley Messrs., and Sons, 3, Cateaton-street	0	10	6
Bowman E., Esq., Victoria Park	0	10	6
Booth Thomas, Esq., Salford	0	5	0
Bolderson J., Junr., Esq., 86, Bury New Road	0	10	6
Carlton Messrs. J., Walker, and Watson, 11, Mosley-street	2	2	0
Carlisle Brothers, Messrs., 1, St. Peter's-square	1	0	0
Cunliffe and Sons, Messrs., Bond-street, Nether-street Tipping-street, Ardwick	1	1	0
Crewdson T. D., Esq., 8, Cecil-street, Greenheys	1	1	0
Carver, Brothers, and Co., Messrs., 7, Lower Mosley-street	1	1	0
Crum Walter, Messrs., and Co., 76, Mosley-street	1	1	0
Calvert Dr. F. Crace, Bond-street	1	1	0
Carver William and Co., Messrs., 15, Mosley-street	1	0	0
Chadwick David, Esq., 64, Cross-street	1	1	0
Charlewood H., Esq., 5, Clarence-street	1	1	0
Cooke Thomas, Esq., Oxford-street Twist Co.	1	1	0
Collins Edward, Esq., Corn Mill, 35, Long Millgate	1	1	0
Chadwick John, Esq., 12A, Mosley-street	0	10	0
Cawley C. E., Esq., M.P., Carlton Buildings, Cooper-street	1	1	0
Corbett J., Esq., Cross-street	0	10	6
Dugdale Messrs. John, and Brothers, Booth-street	1	1	0
D'Hauregard Messrs. H. and Co., Little Lever-street	1	1	0
Elce Messrs. John, and Co., Jersey-street, Ancoats	1	1	0
Farbridge and Holliday, Messrs., 57, King-street	1	1	0
Findlater and Mackie, Messrs.	1	1	0
Fairbairn William, Esq., Polygon, Ardwick	1	1	0
Franklin J. A., Esq., Bury New Road	0	10	0
Fryer, Benson, and Forster, Messrs., Chester-st., Oxford-st.	1	1	0
Franks Abraham, Esq., 114, Deansgate	0	10	6
Fullarton John Alexander, Esq., 49, Major-street	1	1	0
Gladstone Robert, Esq., 4, Half-moon-street	2	2	0
Greg, Brothers, and Co., Messrs., Booth-street	2	2	0

	£	s.	d.
Galloway Messrs. W. and J., Chester-road, Hulme	2	2	0
Graham Messrs. William, and Co., 86, Major-street	1	1	0
Galloway Messrs. J., and Co., 7, Mosley-street	1	1	0
Grover, J. B. K., Esq., 1, Elm-street, Water-street	1	1	0
Gaskell Rev. William, 46, Plymouth-grove	1	1	0
Gladstone Murray, Esq., Cross-street	1	1	0
Gibson Rev. Canon, Polygon, Ardwick	1	1	0
Greaves George, Esq., 336, Stretford-road	0	10	6
Grafton F. W., Esq., 25, Portland-street	2	2	0
Harter William, Esq., Cheapside, King-street	2	2	0
Heywood Arthur H., Esq., the Bank	2	2	0
Heywood E. S., Esq., ,,	2	2	0
Heywood Oliver, Esq., ,,	2	2	0
Hunter Thomas, Esq., Cheapside, King-street	2	2	0
Houldsworth Messrs. J., and Co., 23, Portland-street	1	1	0
Harrison G. Morley, Esq., 6, Piccadilly	0	10	6
Hadfield George, Esq., 24, Fountain-street	0	10	6
Ireland Messrs. Alexander, and Co., Pall Mall	1	1	0
Jackson Messrs. E. and J., Portland-street	1	1	0
Jewsbury and Crux, Messrs., Deansgate	1	1	0
Jackson J. W., Esq.	1	0	0
Joule Dr. J. P., Thorncliffe, Old Trafford	0	10	6
James and Chabot Messrs., Portland-street	1	1	0
Kershaw, Sidebottom, and Co., Messrs. Portland-street	2	2	0
Keighley J., Esq., York-street	1	1	0
Kessler William, Esq., 33, Dale-street	1	0	0
Langton Wm., Esq., M'chester and Salford Bank, Mosley-st.	2	2	0
Leissler John, Esq., Messrs. Du Fay and Co., Booth-street	2	2	0
Langworthy, Brothers, and Co., Messrs., Greengate, Salford	1	1	0
Lyon, Lord, and Co., David-street	1	1	0
Lee Messrs. Daniel and Co., Fountain-street	2	2	0
Leigh John, Esq., Whalley-range	1	2	0
Lund Edward, Esq., St. John-street, Deansgate	1	1	0
Lamb James, Esq., John Dalton-street	1	0	0
M'Laren Messrs. James, and Nephew, 18, George-street	2	2	0

	£	s.	d.
Mackintosh Messrs. Charles, and Co., Cambridge-street ...	2	2	0
Munn Messrs. John, and Co., 52, Fountain-street.....	2	2	0
Makin and Walker, Messrs., 17, Mosley-street	1	1	0
M'Connel W., Esq., Henry-street, Ancoats.....	2	2	0
M'Connel J., Esq., Bent Hill, Prestwich.....	2	2	0
M'Naughton and Thom, Messrs., 80, Mosley-street.....	1	1	0
Moller Isaac Joseph, Esq., 8, Norfolk.street	1	1	0
Mellor Thomas, Esq., 204, Clairville, Oxford-street	1	1	0
M'Clure Messrs. John, and Son, Bond-street	1	1	0
Mendel Sam, Esq., Portland-street	1	1	0
Mayson J. S., Esq., Charlotte-street.....	0	10	0
M'Kerrow, Rev. Dr., 85, Plymouth Grove	0	10	6
M'Niven Charles, Esq.....	1	1	0
Novelli and Co., Messrs., 60, George-street	2	2	0
Neild Alfred, Esq., George-street.....	1	1	0
Nicholls B., Esq., Eagley House, Stockport-road.....	1	1	0
Noble Dr., 103, Piccadilly	1	1	0
Newton John, Esq., Carlton Buildings	1	1	0
Ogden Dr., Lever-street	0	10	0
Ogden Henry, Esq., 126, Deansgate.....	0	10	6
Oxley Edwin, Esq., 43, Port-street	0	10	0
Peel Messrs. J. and G., Pollard-street, Ancoats.....	2	2	0
Philips Messrs. J. N., and Co., Church-street	2	2	0
Peel Messrs. John, and Co., 11, Peel-street, Duke-street.....	2	2	0
Potters and Taylor, Messrs., 1, George-street	2	2	0
Philips Herbert, Esq., Church-street	1	1	0
Potter Messrs. Edmund, and Co., 10, Charlotte-street	1	1	0
Phillipi Edward, Esq., Hall-street, Oxford-street.....	0	10	0
Pearce Messrs. M., and Co., Bale-st., Lower Mosley-street...	1	1	0
Powlson and Sons, Messrs., Bow-street	1	1	0
Pearson Mr. Alderman, Bridgewater-place	0	10	6
Parlane James, Esq., Dickinson-street	1	0	0
Reiss Brothers, Messrs., 104, Cross-street	2	2	0
Ross Malcolm, and Co., Messrs., Cromford-court	1	1	0

	£	s.	d.
Ransome, Arthur, Esq., Peel-terrace, Bowdon	1	1	0
Ross Edward, Esq., London-road Station	1	1	0
Richson Rev. Canon, 11, Shakespeare-street	1	1	0
Rylands and Son, Messrs., New High-street	1	1	0
Rickards F. P., Esq., 12, Police-street, King-street	1	1	0
Ree H. P., Esq., 27, Faulkner-street	1	1	0
Ross, William, Esq., 9, Leaf-square, Pendleton	1	1	0
Ralli Brothers, Messrs., Peter-street	1	1	0
Rumney Robert, Esq., King-street	1	1	0
Rice J., Esq., Pall-mall	0	5	0
Ryder James, Esq., Fallowfield	1	1	0
Ryder T. D., Esq., M.A.	1	1	0
Radford Thomas, Esq., M.D., Higher Broughton	1	1	0
Sampson and Leppoc Messrs. H. J., and Co., St. Peter's-sqr.	2	2	0
Schuster Messrs. Leo, Brothers, & Co., 12, Sackville-street	2	2	0
Sharp, Stewart, and Co., Messrs., Atlas Works, Oxford-street	2	2	0
Slater W., Esq. (Slater and Heelis), Princess-street	2	2	0
Samelson Dr., 15, John-street, Deansgate	1	1	0
Schwind Charles, Esq., Bowdon	1	0	0
Schunck, Souchay, and Co., Messrs., Peter-street	1	1	0
Slagg Messrs. John, and Co., 12, Pall-mall	1	1	0
Smith G. Fereday, Esq., Crown-street, Hulme	1	1	0
Smith Dr. R. Angus, York-place, Rusholme	1	1	0
Satterfield Joshua, Esq., Alderley	1	1	0
Shaw John, Esq., Brewery, City-road	1	1	0
Standring John, Esq., 18, Fountain-street	1	0	0
Stoehr Messrs. E., and Co., Deansgate	1	1	0
Stowell Rev. T. A., M.A.	1	1	0
Schofield, Thomas, Esq., Cornbrook	1	1	0
Turner Thomas, Esq., 77, Mosley-street	2	2	0
Taylor, Garnett, and Co., Messrs., Cross-street	2	2	0
Tysoe Messrs. Charles, and Sons, New Cannon-street	2	2	0
Turner Wright, Esq., Brindle-heath, Pendleton	1	1	0
Thompson, Joseph, Esq., Pin Mill, Ardwick	1	1	0
Trapp S. Clement, Esq., 88, Mosley-street	0	10	0
The Strines Printing Co., George-street	2	2	0

	£	s.	d.
Vernon, Freemantle, and Co., Messrs., Piccadilly Mills	2	2	0
Westhead Messrs. J. P. and E., and Co., 49, Piccadilly	2	2	0
Wadkin and King, Messrs., 12, Chepstow-street	1	1	0
Weston S., Esq., 3, Moult-street, Cross-street	1	1	0
Warner Thomas, Esq., 9, Cross-street.....	1	1	0
Winterbottom A., Esq., 29, Mosley-street	1	0	0
Wilkinson Dr. M. A. E., Greenheys.....	1	1	0
Watts Sir James, Knt., Portland-street	1	1	0
Williams Messrs. L. and E., Upton-street, London-road.....	1	1	0
Worthington Thomas, Esq., Kiug-street	1	1	0
Whitworth Messrs. B., and Brother, Exchange-street	2	0	0
Whitehead Dr., 87, Mosley-street.....	1	1	0
Wells, Cook, and Potter, Messrs., 18 and 20, Mosley-street	1	1	0
Waters Messrs. J. E., and Co., 31, Portland-street	1	1	0
Wood M. Bateson, Esq., 19, Princess-street	1	1	0
Woodhouse Rev. F. C., St Mary's Rectory, Upper Moss-lane	1	1	0
Westmore Rev. H. H., 15, York-street, Cheetham	0	10	6
Williams Mr. Councillor, 1, Marlborough-square	0	10	0

APR 9

MANCHESTER AND SALFORD

RETURN FROM PAUPER CHARITABLE AND PUBLIC

New Cases of Disease coming under

MANCHESTER.

Area in Statute Acres ..... Manchester Township 1,645

Population in 1861 ..... ,, ,, 185,050

DISEASES.	Poor Law Districts.							Public Institutions.								
									Royal Infirmary.					Children		
	St. Peter's 1	St. Andrew's 2	St. George's 3	Cathedral 4	St. Jude's 5	St. Michael's 6	Total of Districts	Workhouse 7	In-patients 8	Out-patients 9	District I. 10	District II. 11	District III. 12	St. Mary's Hospital 13	Clinical Hospital 14	City Gaol 15
Small-pox	..	..	2	4	..	7	13	20	6	1	..	2	5	2	..	..
Measles	7	5	12	10	11	46	91	24	2	4	3	13	19	71	48	..
Scarlet Fever	63	43	31	24	33	65	259	64	60	8	27	73	112	102	117	1
Diphtheria	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2
Whooping-cough	9	9	2	3	4	16	43	44	..	60	..	7	7	165	100	1
Croup	..	..	1	..	1	1	3	4	1	..	..	2	..	12	2	..
Diarrhœa	58	93	31	46	55	78	361	235	1	352	10	20	54	793	473	262
Dysentery	6	1	6	2	2	13	30	6	1	21	3	2	3	30	..	1
Malignant Cholera	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..
Erysipelas	8	3	..	7	..	6	24	89	10	42	14	4	8	12	..	7
Continued Fever	106	14	153	59	41	23	396	75	1	4	..	12	4	104	24	2
Typhus	6	12	2	13	22	78	133	640	187	1	35	46	69	6	4	3
Enteric or Typhoid	2	5	2	4	2	5	20	57	76	4	5	14	13	25	19	..
Febricula	61	10	17	37	35	105	265	204	22	96	19	62	49	488	67	96
Ague	..	..	..	..	..	..	..	8	..	8	..	..	..	..	..	..
Rheumatic Fever	8	9	3	9	18	4	51	147	65	303	26	22	35	2	4	..
Puerperal Fever	..	..	1	..	..	..	1	10	..	..	..	..	3	..	..	..
Bronchitis and Catarrh	205	238	128	147	118	248	1084	1375	33	1718	68	118	168	637	349	202
Influenza	1	1	..	..	..	..	2	77	..	24	..	..	..	42	2	81
Pleurisy and Pneumonia	33	17	3	20	8	28	109	316	25	62	11	14	19	32	52	5
Phthisis	7	25	20	23	13	28	116	436	25	1087	49	79	131	191	57	44
Constitutional Syphilis	13	5	1	6	1	17	43	526	21	681	20	9	28	27	46	127
All other Diseases	881	366	659	393	209	526	3034	3929	105	6725	241	333	431	3072	2948	190
Accidents	70	31	26	50	22	43	242	363	970	5889	25	48	49	..	11	1
TOTAL	1544	887	1100	857	595	1337	6320	8649	2569	17090	556	880	1207	5813	4323	1025

Medical Officers to whom the Association

(1) *Mr. R. M. Mann,*
(2) ,, *J. Broadbent,*
(3) ,, *Edward Meacham,*
(4) ,, *John Walsh,*
(5) *Mr. Octavius Dean,*
(6) *Dr. Ledward,*
(7) *Mr. J. Westmoreland,*
(8) ,, *J. P. Sleightholme,*
(9) (10) (11) (12) *Mr. W. H. Carruthers,* ,, *J. Porter,* ,, *C. Currie Richie,*
(13) ,, *H. Runcorn,*

SANITARY ASSOCIATION.

INSTITUTIONS OF MANCHESTER AND ADJOINING DISTRICTS.

Treatment during the year 1868.

SALFORD.					HULME.			CHORLTON.		ARDWICK.	PENDLETON AND PENDLEBURY.				
..... 1,329					.... 477			.. 646 ..		..508..	..... 2,650			....Area in Statute Acres.	
..... 70,967					.. 68,209....			..44,850..		21,739	..... 24,448			....Population in 1861.	
POOR LAW DISTRICT.		PUBLIC INSTITUTIONS.			POOR LAW DISTRICTS.										
Greengate	Regent Road	Workhouse	Dispensary	New Bailey	St. George's	Medlock	St. Philip's	Poor Law District	Dispensary	Poor Law District	Ardwick & Ancoats Dispensary	Chorlton Union Workhouse	Total.	DISEASES.	DEATHS.
16	17	18	19	20	21	22	23	24	25	26	27	28			
2	1	2	7	..	..	..	..	2	1	..	..	6	76	Small-pox	4
11	10	2	88	..	6	17	21	14	41	1	23	18	527	Measles	17
26	58	44	388	..	110	40	123	50	132	23	52	26	1895	Scarlatina	208
..	3	..	1	..	..	..	..	1	..	..	3	1	12	Diphtheria	1
2	..	8	104	..	15	3	7	3	18	6	19	8	620	Whooping-cough	27
..	1	..	1	..	..	..	..	..	3	..	..	2	31	Croup	4
118	119	2	518	177	111	72	104	89	295	18	84	328	4596	Diarrhœa	180
13	7	..	37	..	1	..	7	6	8	1	1	5	183	Dysentery	5
..	..	..	..	..	..	..	..	..	..	..	..	..	3	Malignant Cholera	2
3	..	1	21	2	15	6	4	1	30	..	9	6	308	Erysipelas	8
90	7	282	217	..	17	106	27	5	73	21	12	47	1526	Continued Fever	23
11	54	19	76	1	14	3	29	57	6	1	7	322	1724	Typhus	247
..	104	..	105	..	20	..	28	23	33	5	10	11	572	Enteric or Typhoid	61
6	68	2	229	2	44	32	107	86	171	17	112	33	2277	Febricula	4
..	3	..	1	..	..	..	1	..	..	1	..	..	22	Ague	..
6	12	20	140	7	25	57	7	13	17	15	57	18	1049	Rheumatic Fever	3
..	9	..	..	..	1	3	..	..	..	2	..	.	29	Puerperal Fever	4
348	280	29	1817	165	220	268	264	184	377	110	311	817	10942	Bronchitis and Cattarrh.....	326
8	2	1	91	..	..	..	..	..	24	..	4	2	360	Influenza	..
3	19	11	149	14	17	11	11	2	57	3	37	45	1024	Pleurisy and Pneumonia.....	99
30	86	13	556	11	65	33	18	62	116	14	122	223	3564	Phthisis	489
9	19	1	283	56	16	3	2	61	14	5	23	269	2289	Constitutional Syphilis.....	30
786	1121	477	3899	160	477	344	569	930	1357	287	709	4385	37463	All other Diseases	1395
61	60	..	2875	2	38	29	40	72	818	9	1264	57	12923	Accidents	198
1533	2043	915	11603	597	1212	1027	1369	1661	3591	539	2859	6629	84010	..... TOTAL	3335

is indebted for the annexed Returns.

(14) *Mr. W. M. Maccall,*
(15) *Dr. J. Ogden Fletcher,*
(16) *Mr. J. Teale,*
(17) *Dr. T. M. Johnson,*
(18)

(19) *Mr. J. O. Bradbury,*
(20) *Dr. Braddon,*
(21) *Mr. S. Woodcock,*
(22) *Dr. Alex. Wilson,*
(23) *Mr. H. M. Williamson,*

(24) *Mr. Joseph Foster,*
(25) „ *W. C. Barnish.*
(26) „ *J. V. L. Westmacott,*
(27) „ *R. P. O. Gorman,*
(28) „ *George Clements.*

14 FEB 50

RETURN OF BIRTHS AND DEATHS

COMPILED BY

Township of	Population 1861.	Deaths for the Years ending December				
		1868	1867	1866	1865	1864
Manchester	185,410	6965	6632	6932	7156	6076
Salford	71,002	2703	2491	2548	2458	2203
Pendleton and Pendlebury.	24,448	781	664	649	676	566
Chorlton	44,795	1109	1119	1085	1118	960
Hulme and Moss Side	71,128	2143	2113	2108	1943	1831
Ardwick	21,746	764	744	667	656	637
Total.....	418,529	14465	13763	13989	14007	12273

It has been thought advisable that the mortality return be remodelled; the deaths from the several causes, hitherto given separately, are now included in the general grouping. For more detailed information, reference can be made to the Weekly Returns. Moreover, the rate of death to population is omitted, as it is impossible to ascertain with anything like accuracy the variation of population from year to year. To assume that the rate of increase will be the same as it was during the ten years preceding the last census will certainly, in this locality, lead to error. An illustration in proof may be supplied by the fact that the increase of population in the township of Manchester at the census of 1851, from the previous

FOR THE YEARS 1864 TO 1868.

MR. WILLIAM ROYSTON.

Births for the Years ending December					Population 1861	Township of
1868	1867	1866	1865	1864		
7124	6907	6742	6835	6838	185,410	..... Manchester
3288	3222	3109	3004	3064	71,002	..... Salford
1120	1080	989	993	1010	24,448	..... Pendleton and Pendlebury.
1649	1634	1576	1607	1466	44,795	..... Chorlton
3276	3061	3032	2896	2968	71,128	Hulme and Moss Side
1174	1157	1114	1106	1152	21,746	..... Ardwick
17631	17061	16562	16441	16498	418,529	..... Total

one of 1841, was about 15 per cent., but at the census of 1861 the population had decreased nearly 1 per cent.; and again, in Hulme, at the census of 1841, the increase from 1831 was about 200 per cent., and at that of 1851 it was about 100 per cent., but at that of 1861 the increase was only about 30 per cent. The plan of estimating a certain number of persons for each house built is also fallacious, as the density of population varies in towns considerably with the circumstances of the times. The method adopted in previous tables of adding the excess of births over deaths cannot yield accurate results, because it does not include the effects of emigration and immigration.